UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,499	05/23/2006	Ningjiang Chen	CN 030033	2097

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EXAMINER
CHOKSHI, PINKAL R

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/580,499	CHEN ET AL.
	Examiner	Art Unit	
	PINKAL CHOKSHI	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2006*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *23 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☒ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

2.   **Claims 1-5, 7-11, 14-16, and 18-20** are rejected under 35 U.S.C. 102(e) as

being anticipated by US PG Pub 2005/0024543 A1 to Ramaswamy et al (hereafter

referenced as Ramaswamy).

Regarding **claim 1**, "a method for broadcasting a digital program" reads

on the method for improving the reception of digital signals (abstract) disclosed

by Ramaswamy and represented in Fig. 1.

As to "method comprising: a. detecting the broadcasting quality of a

normal program being broadcast" Ramaswamy discloses (¶0008 and ¶0027) that

the error detection circuit determines the quality of main signal (normal program)

to see if there is any changed during transmission as represented in Fig. 2

(element 121).

As to "b. interposing a prearranged program if the detected broadcasting

quality is below a predetermined value" Ramaswamy discloses (¶0008) that the

supplemental signal (prearranged program) is substituted when the main signal

is undesirably changed during transmission. Ramaswamy further discloses

(¶0027) that the signal-to-noise ratio is used to detect a low quality of the main

signal. As to "the broadcasting quality of this prearranged program reaching a

predetermined level" Ramaswamy discloses (¶0008, ¶0028, and ¶0036) that the

transmission of the supplemental data substitutes the main signal and is

continued with the same quality of main signal until the main signal is restored to

predetermined quality threshold.

Regarding **claim 2,** "the method further comprising: c. detecting an

available broadcasting quality of the normal program when broadcasting the

prearranged program" Ramaswamy discloses (¶0028) that the use of

supplemental data will continue until the receiver recovers and the main channel

is restored to a predetermined quality threshold.

As to "d. resuming broadcasting the normal program when the available

broadcasting quality returns back to another predetermined value" Ramaswamy

discloses (¶0038) that when the main program signals are available, the receiver

will resume broadcasting of main signals at predetermined quality threshold.

Regarding **claim 3,** "the method further comprising the step before step d:

e. detecting whether the broadcast of the inserted prearranged program has

been finished" Ramaswamy discloses (¶0028) that the use of the supplemental

data will continue until the supplemental data is finished.

Regarding **claim 4,** "the method wherein said prearranged program is stored in a local storage in advance" Ramaswamy discloses (¶0025) that the supplemental signals are stored in buffer delay circuit in advanced as represented in Fig. 2 (element 150).

Regarding **claim 5,** "the method wherein said prearranged program comes from another program attached to the normal program being broadcast" Ramaswamy discloses (¶0008) that the supplemental signal is attached to main signal and replaces the main signal when the main signal interrupts. Ramaswamy further discloses (¶0025) that the main signal and supplemental signals are two streams connected in stream select unit and attached together in time as represented in Fig. 3 (elements 300, 310).

Regarding **claim 7,** "the method wherein step b further comprising: filling a cache used to store other program with the prearranged program if the detected broadcasting quality is below a threshold value, the threshold value being higher than said predetermined value" Ramaswamy discloses (¶0008 and ¶0033) that the supplemental signal is stored in a buffer. Ramaswamy further discloses (¶0028) that the use of supplemental program data will continue until the receiver recovers and the main signal is restored to a predetermined quality threshold.

As to "wherein obtaining the prearranged program from said cache for broadcasting if the detected broadcasting quality is below a predetermined value" Ramaswamy discloses (¶0028) that the system will continue to use the supplemental data from the buffer until the main signal is restored.

Regarding **claim 8,** "the method wherein said normal program is transmitted through a network" Ramaswamy discloses (¶0008 and ¶0012) that the main signal is transmitted from transmitter to receiver using ATSC standard network.

Regarding **claim 9,** "the method wherein step (a) comprising: detecting the filling status of the cache used for storing the normal program" Ramaswamy discloses (¶0021, ¶0026, ¶0028) that the main signal stream is stored in buffer and the detection circuit will determine to transmit supplemental signal when main signal falls below quality threshold and restore the main signal to a predetermined quality in buffer as represented in Fig. 1B (element 32').

Regarding **claim 10,** "the method wherein said prearranged program coming from a local server which has a specific broadcasting quality" Ramaswamy discloses (¶0008 and ¶0036) that the supplemental signal received from transmitter has the same quality as the main signal.

Regarding **claim 11,** "the method wherein said prearranged program

being stored in a local storage in advance, this prearranged program being

downloaded from a network" Ramaswamy discloses (¶0008 and ¶0025) that the

supplemental signals, which are stored in buffer delay circuit in advanced,

transmitted from transmitter to receiver as represented in Fig. 2 (element 150).

Regarding **claim 14,** "a system for broadcasting a digital program" reads

on an apparatus for improving the reception of digital signals (abstract) disclosed

by Ramaswamy and represented in Fig. 1.

As to "apparatus comprising: a detecting apparatus for detecting the

broadcasting quality of a normal program being broadcast" Ramaswamy

discloses (¶0008 and ¶0027) that the error detection circuit determines the

quality of main signal (normal program) to see if there is any changed during

transmission as represented in Fig. 2 (element 121).

As to "a switching apparatus for interposing a prearranged program if the

detected broadcasting quality is below a predetermined value" Ramaswamy

discloses (¶0008) that the supplemental signal (prearranged program) is

substituted when the main signal is undesirably changed during transmission.

Ramaswamy further discloses (¶0027) that the signal-to-noise ratio is used to

detect a low quality of the main signal. As to "the broadcasting quality of this

prearranged program reaching a predetermined level" Ramaswamy discloses

(¶0008, ¶0028, and ¶0036) that the transmission of the supplemental data

substitutes the main signal and is continued with the same quality of main signal

until the main signal is restored to predetermined quality threshold.

Regarding **claim 15,** "the system wherein said detecting apparatus being

also used to detect the available broadcasting quality of the normal program"

Ramaswamy discloses (¶0028) that the use of supplemental data will continue

until the receiver recovers and the main channel is restored to a predetermined

quality threshold.

Regarding **claim 16,** "the system wherein said switching apparatus being

also used to resume to broadcast the normal program when the detected

available broadcasting quality of the normal program returns back to another

predetermined value when the prearranged program is being broadcast"

Ramaswamy discloses (¶0038) that when the main program signals are

available, the receiver will resume broadcasting of main signals at predetermined

quality threshold.

Regarding **claim 18,** "the system wherein said detecting apparatus

including a cache controlling apparatus" Ramaswamy discloses (¶0021, ¶0026,

¶0028) that the main signal stream is stored in buffer and the detection circuit will

determine to transmit supplemental signal when main signal falls below quality

threshold and restore the main signal to a predetermined quality in buffer as

represented in Fig. 1B (element 32').

Regarding **claim 19,** "the system wherein said switching apparatus

including a cache switching apparatus" Ramaswamy discloses (¶0025) that the

supplemental signals are stored in buffer delay circuit in advanced as

represented in Fig. 2 (element 150).

Regarding **claim 20,** "the system wherein the normal program is

transmitted through a network" Ramaswamy discloses (¶0008 and ¶0012) that

the main signal is transmitted from transmitter to receiver using ATSC standard

network.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 6 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ramaswamy et al in view of US Patent 6,760,916 to Holtz et al (hereafter

referenced as Holtz).

Regarding **claim 6,** Ramaswamy meets all the limitations of the claim except "the method further comprising: g. getting statistics information for time and content type of the inserted prearranged program and said statistics information is used for charge." However, Holtz discloses (col.37, lines 49-53) that the statistical data, which includes time of the day when advertisement showed and type of advertisement, is collected. Ramaswamy further discloses (col.37, lines 54-65 and claim 13) that the account manager manages invoices based on the statistical data collected. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Ramaswamy's invention by using/adding statistical information used for billing purposes as taught by Holtz in order to set prices by broadcaster based on a target audience, media content, time spot, durations of the advertisement, time of transmission or other criteria (col.3, lines 20-24).

Regarding **claim 17,** "the system further comprising: a statistical apparatus for getting statistics information for time and content type of the inserted prearranged program" Holtz discloses (col.37, lines 49-53) that the statistical data, which includes time of the day when advertisement showed and type of advertisement, is collected. Ramaswamy further discloses (col.37, lines 54-65 and claim 13) that the account manager manages invoices based on the statistical data collected. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Ramaswamy's

invention by using/adding statistical information used for billing purposes as

taught by Holtz in order to set prices by broadcaster based on a target audience,

media content, time spot, durations of the advertisement, time of transmission or

other criteria (col.3, lines 20-24).

5.   **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ramaswamy et al in view of US Patent 7,339,954 to Futamata et al (hereafter

referenced as Futamata).

Regarding **claim 12**, Ramaswamy meets all the limitations of the claim

except "the method further comprising: sending a request for requiring a lost

segment of the normal program because of the broadcast of the inserted

prearranged program." However, Futamata discloses (col.8, lines 48-63) that

when receiver receives an error in the digital data, it creates supplemental data

table which includes re-transmission of the digital data, and transmits the

supplemental information to a broadcasting station as represented in Fig. 2. As

to "receiving said lost segment of the normal program" Futamata discloses (col.9,

lines 12-16) that the supplemental data transmitting device broadcasts the

supplemental data to receiver as represented in Fig. 2. As to "combining the lost

segment of the normal program with the subsequent normal program for

continuously" Futamata discloses (col.9, lines 6-12) that the supplemental data

extractor extracts and generates supplemental data from an original data. This

unit is connected to broadcasting device that broadcast original data as well as

supplemental data to receiving device as represented in Fig. 2. Therefore, it

would have been obvious to one of the ordinary skills in the art at the time of the

invention to modify Ramaswamy's invention by sending a request for

retransmission of data as taught by Futamata in order to playback the prefect

broadcast program even if the part of the data is lost (col.1, lines 62-63).

Regarding **claim 13,** "the method wherein storing the subsequent normal

program in a local storage" Ramaswamy discloses (¶0021, ¶0026, ¶0028) that

the main signal stream is stored in buffer and the detection circuit will determine

to transmit supplemental signal when main signal falls below quality threshold

and restore the main signal to a predetermined quality in buffer as represented in

Fig. 1B (element 32').

Ramaswamy meets all the limitations of the claim except "said combining

step comprising: storing the received lost segment of the normal program in a

local storage" Futamata discloses (col.5, lines 37-41) that the supplemental data

is received and stored in the recording device as represented in Fig. 2 (element

18). As to "reading the received lost segment of the normal program from the

stored subsequent normal program in a normal playback order for playing back"

Futamata discloses (col.6, lines 30-44) that the receiving side records and

playback supplemental data. Therefore, it would have been obvious to one of

the ordinary skills in the art at the time of the invention to modify Ramaswamy's

invention by sending a request for retransmission of data as taught by Futamata

in order to playback the prefect broadcast program even if the part of the data is

lost (col.1, lines 62-63).

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- US Patent 6,404,739 to Gonno discloses transmitting/receiving method which

    enables reliable distribution of data.

- US Patent 6,535,717 to Matsushima discloses a system for transmitting,

    receiving and reproducing a digital broadcast singal.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to PINKAL CHOKSHI whose telephone number is (571)

270-3317. The examiner can normally be reached on Monday-Friday 8 - 5 pm (Alt.

Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PRC/
/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2623